

# 1 CENTRAL CONTROL SC-SL2N-E

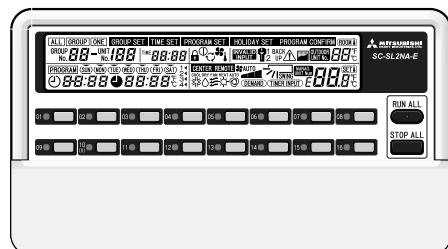
## (1) Specification

Description	CENTRAL CONTROL SC-SL2NA-E
Model name	SC-SL2NA-E
Applicable model	Super Link compatible indoor unit <sup>(1)</sup>
Ambient temperature in operation	0 ~ 40°C
Power supply	1 phase, 100 ~ 240 V, 50/60 Hz
Power consumption	7W
External dimensions (H×W×D)	120mm×215mm×(25 + 35)mm <sup>(4)</sup>
Net weight	1kg
Max. number of connectable indoor units	New SL: Max. 64 units, previous SL: Max. 48 units
Input	External timer input <sup>(2)</sup> 1 point, Non-voltage contact "a" input (Open → Close: RUN, Close → Open: STOP)
	Emergency stop signal input <sup>(2)</sup> 1 point, Non-voltage contact point "a" input, continuous input (Close; Center & Stop all units)
	Demand signal input <sup>(2)</sup> 1 point, Non-voltage contact "a" input, continuous input (Close: Center & Fan mode)
Output	Operation output <sup>(3)</sup> All indoor units at STOP; Open If there is any unit operating; Close
	Error output <sup>(3)</sup> All indoor units normal: Open If there is any abnormal unit; Close

Notes (1) Some of functions may not be used depending on the indoor unit. (See page 4 (2).)

- (2) For the specification of relay being procured at site, select a product that can assure the minimum application load of DC 12 V, 10 mA or less.  
Even if it is reset within 2 minutes after input, the input state is retained.
- (3) For the specification of relay being procured at site, select a product with the rated voltage at DC 12 V, max. power consumption at DC 0.9 W or under (80 mA or under).
- (4) Dimension +35 in ( ) indicates the embedded dimension.
- (5) When the connecting network consists of previous Super Link, it is necessary to set the control selector switch SW5 to OFF.  
(Factory default is ON.)

### Appearance



### Definitions of new and previous Super Link (new and previous SL)

- |                                    |   |
|------------------------------------|---|
| New Super Link (new SL):           | All units connected to the network are models compatible with New Super Link (KXE6 model or later models. Central controller and I/F are from "N" models.) and SL setting is unchanged from shipment ("New" or "AUTO").     |
| Previous Super Link (previous SL): | Units do not meet the conditions of New SL. When even a single unit connected to the network is an earlier model than KXE4 or the connected model is not compatible with New SL. Setting explained in Note (5) is required. |

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The diagram below shows the central control with its cover open.

Also, for the sake of the explanation, all the contents of the LCD display section are shown.

**REMOTE CONTROL OPERATION ENABLE / DISABLE display**

Displays items for which remote controller operation is disabled.

**PROGRAM SET display**

Displayed when a program is being set.

**TIME SET display**

Displayed when the current date and time are being set.

**TIME display**

Displays the time.

**GROUP SET display**

Displayed when the units to be managed are being set.

**Program days of the week display**

— is displayed above today's day of the week and \_ is displayed under each day of the week for which the program has already been set.

**ALL / GROUP / ONE display**

Displays whether operations on this central control are for all units, one group of units, or one unit.

**GROUP No. / UNIT No. display**

Displays the group number and indoor unit number being set or monitored.

**PROGRAM display**

Displays the contents of the program set.

**PROGRAM No. display**

Displays the numbers of the programs that have been set.

**MODE display**

Displays the operation mode.

**DEMAND display**

Displayed during demand input.

**MENU button**

This button selects the setting mode.

**ALL / GROUP / ONE button**

This button selects ALL, GROUP, or ONE to be operated.

**SELECT (△ or ▽) button**

This button is primarily used for selecting the group number or unit number.

**SET button**

This button confirms settings.

**RESET button**

Pressing this button during a setting operation cancels the last step.

**CENTER / REMOTE button**

This button selects centralized control or local remote controller.

**MODE button**

This button selects the operation mode.

**FAN SPEED button**

This button adjusts the fan speed.

**DEMAND SET button**

This button sets the indoor unit for demand.

**CENTER / REMOTE display**

Displays which is in effect, the central control or the local remote controllers.

**HOLIDAY SET display**

Displayed when a program for holidays is set.

**INVALID INPUT display**

Displayed when a button input is invalid.

**FAN SPEED display**

Displays the fan speed.

**MAINTENANCE display**

Displayed when there is a managed unit requiring a check.

**PROGRAM CONFIRM display**

Displayed when a set program is displayed.

**CHECK display**

Displayed when there is a unit being managed in which an error has occurred.

**CLEAN FILTER display**

Displayed when there is a unit being managed whose filter needs to be cleaned.

**ROOM TEMPERATURE display**

Displays the room temperature.

**OUTDOOR UNIT No. display**

Displays the outdoor unit number in the ROOM TEMPERATURE display section.

**MANAG. UNIT NUM display**

Displays the number of units managed in the SET TEMPERATURE display section.

**SET TEMPERATURE display**

Displays the set temperature.

**LOUVER display**

Displays the louver direction.

**TIMER INPUT display**

Displayed when an external timer is being input.

**RUN button**

This button runs indoor units.

**STOP button**

This button stops indoor units.

**CHECK button**

This button is for service. During normal operation, do not press this button.

**FILTER RESET button**

This button resets the CLEAN FILTER display. Press this button after cleaning the air filter.

**TEMP (▲ or ▽) button**

This button sets the temperature.

**LOUVER button**

This button adjusts the louver direction.

**TIMER INPUT SET button**

This button sets an indoor unit for which operation by external timer is enabled.

## (2) Operation and setting

Operation or setting is implemented individually, in the unit of group or in a batch for air-conditioners up to 64 units or 16 groups.

No.	Item	Description
1	RUN/STOP	Performs operation or stop control.
2	Operation mode	Sets $\odot$ Auto <sup>(1)</sup> , $\ast$ Cool, $\diamond$ Dry, $\boxtimes$ Fan or $\heartsuit$ Heat.
3	Temperature setting	Sets temperature in the range of 18 ~ 30°C (0.5°C interval) <sup>(2)</sup>
4	Center/remote	Sets the center, remote or center remote.
5	Individual Lock/Unlock settings enabled in Function Setting of remote controller.	Sets the permission/prohibition on the basis of remote controller function. Sets the permission or prohibition for RUN/STOP control, operation mode setting, temperature setting or each functions. <sup>(3)</sup>
6	Fan speed	Sets 4 <sup>th</sup> , 3 <sup>rd</sup> , 2 <sup>nd</sup> , 1 <sup>st</sup> speed.
7	Fan direction	Sets the auto swing ON/OFF and positions 1 ~ 4.
8	Filter reset	Controls the filter sign reset.
9	Error reset	Puts out the error sign with the RUN or STOP operation

Notes (1) Don't use the auto mode on any indoor unit other than those connected to the simultaneous heating & cooling 3-pipe system or single PAC.

(2) Do not set the set point at 0.5°C intervals in case this product is used with RCD type wired remote controller.

It would cause malfunction of the wired remote controller. Please make sure to set at 1°C intervals.

(3) This function can be applied to the indoor units, which are the model KXE4 or later, SC-ADN-E or later and to the remote controller, which is the model RC-E1 or later. (For models earlier than the above-mentioned, the function becomes invalid because the indoor unit and remote controller cannot receive the instruction even though the setting can be displayed.)

Since setting is overwritten in SL2NA-E even if setting is done from the remote controller, set using SL2NA-E.

(4) This function can be applied to the indoor units, which are the model KXE6D or later, SC-ADNA-E or later.

For the previous indoor units, it is not possible to set the 4th mode but other setting is possible as before.

4th fan speed setting is "impossible" before shipment, so changing to "possible" is needed for 4th fan speed setting from this Central control.

4th fan mode of indoor units operating at 4th fan mode can be displayed on SC-SL2NA-E whose 4th fan mode setting is "impossible".

(SW7 changes "possible" or "impossible" for 4th fan mode setting from SC-SL2NA-E.)

	4th fan speed setting	4th fan speed display
SC-SL2NA-E (before shipment)	Impossible	Possible
SC-SL2NA-E (SW7 is ON)	Possible	Possible
SC-SL2N-E (old model)	Impossible	Impossible

"Possible" needs the indoor units, which are the model KXE6D or later, SC-ADNA-E or later.

## (3) Status monitor

Status monitor may be applied in the unit of group or air-conditioner.

No.	Item	Description
1	RUN/STOP status	Monitors the RUN/STOP status of unit No. on display. With LED for each group, it monitors the RUN/STOP status of each group.
2	Operation mode	Displays the operation mode of unit No. on display.
3	Temperature setting	Displays the setting temperature of unit No. on display.
4	Room temperature	Displays the suction temperature of unit No. on display.
5	Permission/prohibition on the basis of remote controller function	Displays the status of permission/prohibition setting for each remote controller function of unit No. on display. Display the permission/prohibition of the RUN/STOP control, operation mode setting and temperature setting. Permission/prohibition setting for each function as set from the remote controller is not reflected because it is overwritten from SC-SL2NA-E.
6	Fan speed	Displays the fan speed of unit No. on display.
7	Fan direction	Displays the auto swing ON/OFF setting and position setting of unit No. on display.
8	Filter sign	When the filter cleaning time is exceeded on one or more indoor units, the filter sign icon is turned on. When it corresponds to the unit No. on display, the icon blinks.
9	Maintenance <sup>(2)</sup> , (Inspection, Inspection 1, Inspection 2 and Backup)	When there is one or more indoor units requiring maintenance, the maintenance icon is turned on. There are 4 types of operation of Inspection, Inspection 1, Inspection 2 and Back up. Inspection : There is an indoor unit requiring maintenance. Inspection1 : The operation time (GHP outdoor unit) exceeds 10000 hours Inspection2 : The operation time (GHP outdoor unit) exceeds 9800 hours Backup : Connected outdoor unit is on backup operation. Preference order of display is as shown below. Backup > Inspection 1 > Inspection 2 > Inspection When it corresponds to the unit No. on display, the icon blinks.
10	Trouble (Error)	When any error is detected on one or more controlled indoor units, the error icon is turned on. If it corresponds to the unit No. on display, the icon blinks and the display shows the error code, date/time of error occurrence, connected outdoor unit No. (KXE6 type or later).

Notes (1) If "Check" button is pressed when the icon is turned on by 8, 9 and 10, display will change automatically to the display of corresponding unit No.  
When 8, 9 and 10 are mixed, 10 takes the highest priority. When all of 10 is reset, display is in the order of 9 to 8.

(2) When the operation time exceeds 9,800 hours, it displays Inspection 2 and, if it exceeds 10,000 hours, Inspection 1 is displayed. (GHP only)

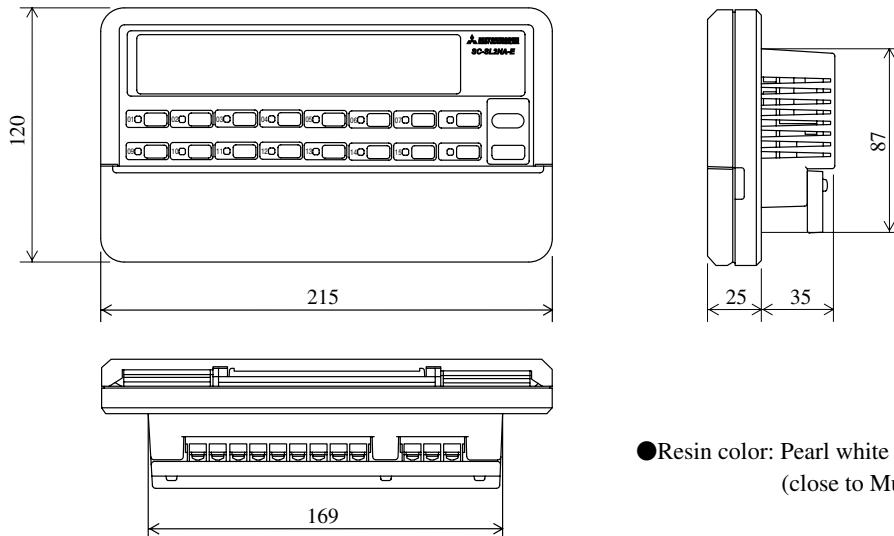
## (4) Program setting

Operation program can be set in the unit of group. It is possible to register the ON/OFF time or ON time + Temperature setting at 4 times a day. Operation time can be designated in the unit of minute.

## (5) Administration and control

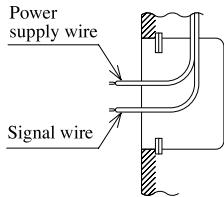
No.	Item	Description
1	Group setting	Registers controlled air-conditioners (max. 64 units) to max. 16 groups.
2	Individual setting	Sets air-conditioners which are subject to the control of SC-SL2N-E, but are not registered to any group.
4	Time & date setting	Sets the clock used for program timer or other. • Year/Month/Date/Hour (24-hour basis) /Minute
5	Alarm history	Displays the error history of around. 100 cases for each air-conditioner.
6	Demand control	Changes preset air-conditioners to "Fan" and "Center" with external demand signals. When the demand signal is cancelled, it returns to the state just before entering the demand control (operation mode and center/remote setting).
7	Emergency stop	Sets all air-conditioners connected to this unit at "Stop" and "Center" with an external emergency signal. As the emergency signal is cancelled, the center/remote setting is returned to original state but all units stay "Stopped"
8	Power restoration control	Allows changing the power restoration process setting. ①Program timer preferred: When SW1 and SW2 are turned ON. RUN/STOP and setting temperature returns to the program timer just before the time of power restoration on the day when the power supply is restored, or other states (operation mode, etc) return automatically with the priority given to the states before the power failure (See ②). When no program timer is set before the power restoration on the day of power restoration, it is restored with the priority given to the states before the power failure (See ②). ②State before power failure preferred: When SW1 is turned ON and SW2 is turned OFF. Each indoor unit returns automatically to the state before the power failure. Any indoor unit running before the power failure starts its operation. ③No power restoration processing: When SW1 and SW2 are turned OFF. SC-SL2N-E does not perform timer the power restoration processing upon restoration of the power supply.
9	Power failure compensation	The group setting, individual setting, program timer setting, holiday setting, external timer setting, demand setting and operating condition (RUN/STOP, operating mode, temperature setting, Center/Remote, remote controller permission/prohibition and airflow volume) are retained regardless of the length of power failure. The clock time is compensated if the power interruption is not longer than 48 hours. If the current time is not displayed after the power restoration following a power interruption exceeding 48 hours, set again the current time. Since the clock time is not retained at the power restoration after a power interruption exceeding 48 hours, the power restoration control in Item No. (9) (a) does not operate.

## (6) Outline drawing

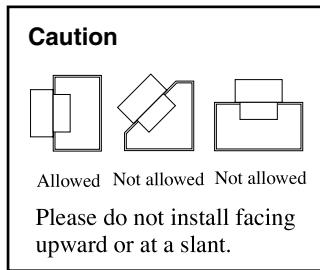


## (7) Installation procedure

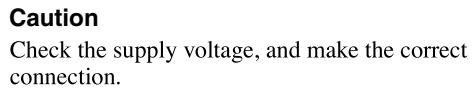
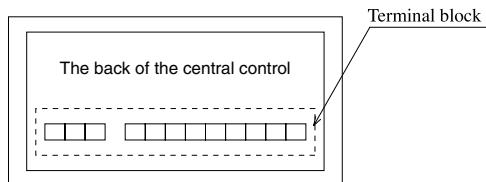
- (a) In case of embedding in a wall, first, embed the power supply wire, signal wire, and electrical box.  
Keep the power supply wire and signal wire separated to prevent malfunctions.



Note: Before connecting an external timer or emergency stop input, be sure to connect the wiring at the worksite first.



- (c) Connect the power supply wire to the terminal.  
(See section (8) Electrical wiring.)

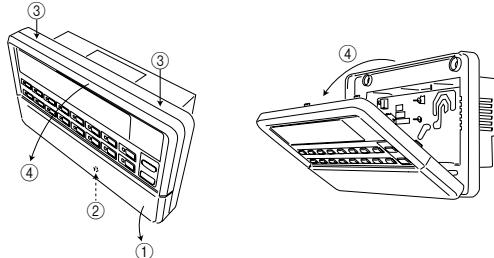


- (e) Use a precision screwdriver to make the control selector settings.  
(For details, see section (10) Control switch selection.)  
(f) Peel off the protective sheet on the screen of central control.

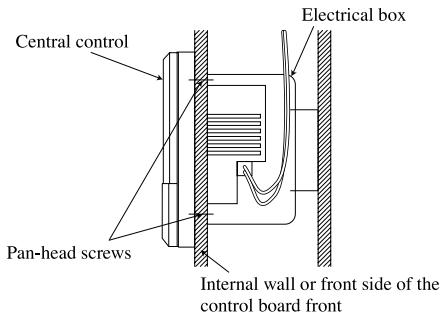
**Important**

Please peel off the protective sheet on the air conditioner screen when transferring the central control to the customer. Peel off before mounting the top case.

- (b) Open the top case by following the procedure below.
- ① Grasp the indentations on the right and left sides, and pull forward to open the cover downward.
  - ② Use a phillips-head screwdriver to remove the screw.  
(Be careful not to lose the screw.)
  - ③ Open the top section in the direction 4 while gently pressing the top section.



- (d) Use the supplied pan-head screws to secure the central control to the electrical box or control board.



- (g) Insert the top case back into its original location in the bottom case as before, and tighten the case mounting screws [(b), ②].  
This completes the installation procedure.

**Caution**

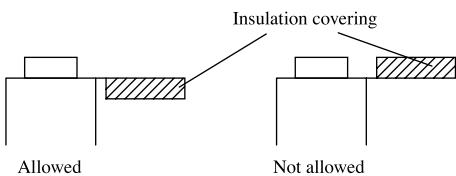
The case and power supply kit are an integrated unit.  
Please do not separate them.

## (8) Electrical wiring

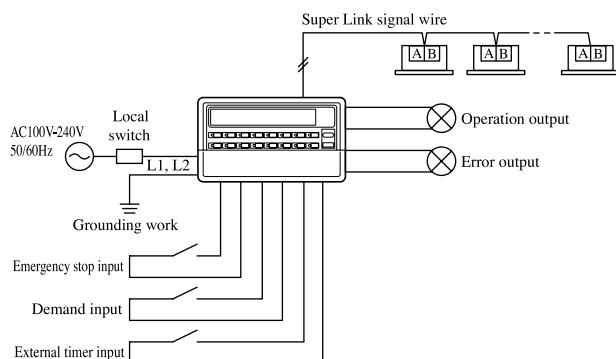
For safety reasons, please use the round crimping terminals with insulated sleeves for connecting all wires to the central control.

- Please do the grounding work. Please do not connect earth line with gas pipes, water pipes, lightning rods and grounding line of telephone.
- Please do not turn on the power supply (local switch) until all of the work is completed.
- Please wait at least two minutes after the indoor and outdoor units are turned on before turning on the power supply.
- Except for the central control in the figure, all of the components are obtained at the site (wires, switches, relays, power supply, lamps, etc.).
- Please be sure to build the breaker which is easily accessible with building equipment's wiring.
- Please be sure to use the supplied round crimping terminals when connecting wires to the power supply terminal block and Super Link terminal block.
- Please use demand input device, emergency stop input device and external timer input device comply with a relevant IEC safety standard.

Refer to the figure below for the terminal orientation.



### Wiring Outline



Before connecting the wires, remove the cover of the terminal block.

After the work is completed, fix the cover of the terminal block as before.

The cover is used to prevent electric shock due to accidental contact.

### Wiring specifications

Power supply wire	1.25mm <sup>2</sup>
Local switch	10A
Super Link signal wire (Note 1, Note 2)	Shielded wire (MVVS 2-core) 0.75mm <sup>2</sup> -1.25mm <sup>2</sup> Max. 1000m per network (Max. distance: 1000m, Total wire length: 1000m)
Operation output, Error output, Demand input, Emergency stop input, External timer input wire	CCV, CPEV (2-core) 0.75mm <sup>2</sup> - 1.25mm <sup>2</sup> Max. 200m
Grounding wire	0.75mm <sup>2</sup> - 6mm <sup>2</sup>

Notes (1) Use a shielded wire for the Super Link signal wire.

Ground both ends of the shielded wire.

(Connect the ground for the central control to the  $\frac{1}{2}$  section in "System wiring".

(2) If the indoor and outdoor units connected to the network are all compatible units with New Super Link, a total wire length of 1500m per line is possible (maximum distance: 1000m). However, be sure to use a 0.75mm<sup>2</sup> wire diameter if the total wire length exceeds 1000m. For further information, please contact your sales representative or dealer.

## (9) Installation work

Please install the central control after turning off the power for fear of electric shock.

Please arrange or protect the wiring so that excessive force is not applied to the electrical wires.

Control PCBs (printed circuit boards) are mounted to both the top and bottom cases.

Be careful that you do not damage the PCBs when using a screwdriver and other tools.

The PCBs can be damaged by static electricity, and so be sure to discharge any static electricity accumulated on your body before starting the work.

### (a) Installation place

Please install in an indoor location that is not exposed to electromagnetic waves, water, dust, or other foreign substances.

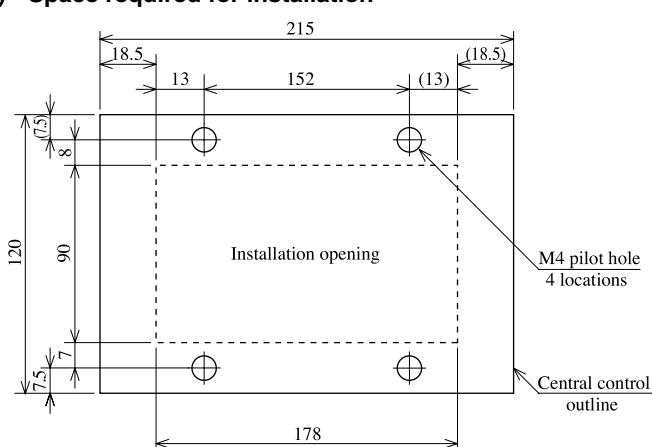
The operating temperature range of this product is from 0°C to 40°C.

Install in a location where the ambient temperature remains within the operating temperature range.

However, if the operating temperature range is exceeded, be sure to implement corrective measures such as installation of a cooling fan.

Be aware that continued usage of this of this central control outside the operating temperature range can result in operation problems.

### (b) Space required for installation



The dotted lines show the installation opening section for installation on the control board (the dimensions are only an example).

### Service space

Front of central control

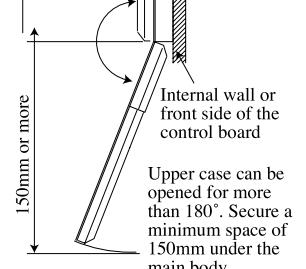
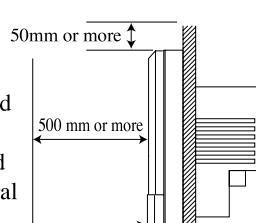
500mm or more is needed

Bottom of central control

150mm or more is needed

Left, right and top of central control

50mm or more is needed



### (c) In case of installing on the control board

Please be sure to lock the control board to protect persons from the electric shock.

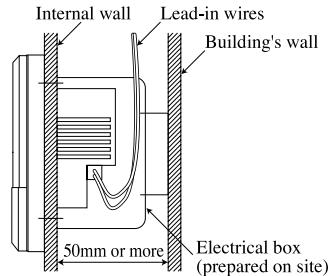
Avoid usage of heat-retaining materials and heat-insulating materials because these can result in heat buildup and adversely affect the operation of the central control.

### Caution

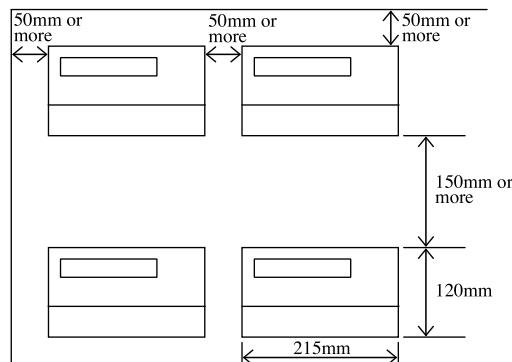
Please do not install devices that can cause the ambient temperature to rise in the same control board. Also, do not install multiple controllers in the same control board. These can cause heat to build up and result in false operation. If multiple central control must be installed in the same control board, take corrective measures to ensure that the temperature in the control board does not rise above 40°C such as by installing cooling fans.

### (d) In case of embedding in a wall

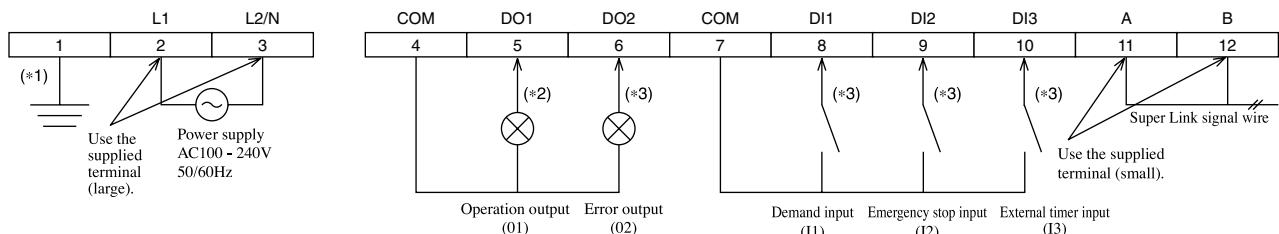
Please check that there is sufficient space inside the wall. If the temperature inside the wall exceeds 40°C, install the central control on the control board.



When performing the continued installation of multiple controllers, be sure to obtain the distance between units and service space as shown in the figure.



### System wiring



(\*1) Please connect to ground for signal wire and power supply wire.

(\*2) The selected relay obtained at the site should have the following specifications:  
rated voltage of DC 12V and maximum power consumption of DC 0.9W or less (80mA or less)

(\*3) The selected relay obtained at the site should have the following specifications:  
Non-voltage "a" contact input and capable of withstanding a minimum applied load of DC12V and 10mA or less.

The DO and DI terminals are polar.

Do not connect three or more wires to the same terminal.

Note Do not connect the power supply wire to another terminal.

Making the wrong connection can result in damage or burning of electrical parts and is extremely dangerous.

Please check the wires again before turning on the power supply.

## (10) Control switch selection

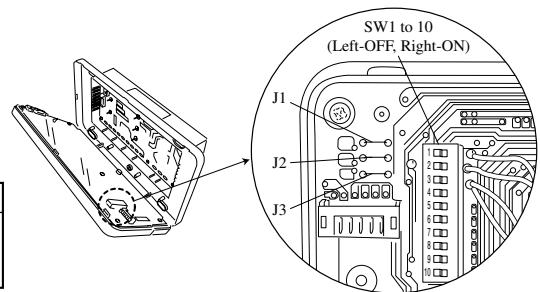
It is possible to change the setting as follows by settings of the PCB switches SW1 to SW10, J1, J2, and J3 on the central control. Please change the control on site as necessary. It is recommended to change the setting by using a precise driver.

### (a) Switch

SW No.	Default	ON	OFF	Description
SW	1	ON	See table at right	Power failure compensation function
	2	ON	See table at right	Auto mode can be set
	3	OFF	Auto mode cannot be set	Auto mode display
	4	ON	Display	No display
	5	ON	New	Filter sign display on/off
	6	ON	Center & Fan	Previous
	7	OFF	Center	Center & Fan
	8	OFF	setting possible	Sending of data during demand input
	9	OFF	setting not possible	4th fan speed set
	10	OFF	Time Month, Day	Month, Day Time
				Error history display
				Return to the original status
				The units have stopped
				Operation after emergency stop cancel
				(Keep at OFF)

### Power failure compensation function selector

SW-1	SW-2	Function
ON	ON	Sending of program settings when power comes back on (The operation status before the power failure is sent if there is no program when power comes back on.)
ON	OFF	Sending of operation status before power failure
OFF	ON	(Do not make this setting.)
OFF	OFF	No data is sent when power comes back on



### (b) Jumper wires

	Short circuit (default)	When disconnected	Function
J1	Setting possible	Setting not possible (Including during external input.)	Center/Remote setting <sup>(*)2</sup> (Including the allowed/prohibited settings of each remote control function)

(\*)1) Switching is needed if the connection is previous Super Link.

Actual type of network connection (New or previous Super Link) depends on the models of indoor units and outdoor units, etc. Please contact the agency or the Sales representative.

(\*)2) When J1 is disconnected, the Center/Remote does not be set from this central control. Please disconnect if multiple central controls are installed and another main central control exists.

When J1 is disconnected data is sent for the blower only during demand input (nothing) is performed when SW6 is off) and for stop only during emergency stop input

## (11) Setting the control target units

Make the settings for the units to be controlled by the central control.

For the setting procedure, see the user's manual attached to the central control.

**At shipping, none of the units are set as target units for control, and so the units to be controlled by this central control must be set as control target units.**

Three types of settings are available.

- ① Units are selected as control targets for central control and controlled as a group → Group setting
- ② Units are selected as control targets for central control but not grouped → Individual setting
- ③ Units are not selected as control targets for central control  
(or units will be controlled by another central control) → Not target units for control

Be sure to set the current time. This is needed for the program settings and error history display.

Turn on the power and press the three buttons (MENU, RESET, GROUP No. 10) at once more than five second, that can initialize the setting contents.

### ● Group control when using multiple units

This central control can control up to 64 target units (up to 48 units when using the previous Super Link setting). Multiple central controls must be installed to control 65 or more air conditioner units.

When connecting multiple central controls on a single network, any group settings can be made for each central control.

